Idaho National Engineering Laboratory

DIVISION OF ENVIRONMENTAL QUALITY

Proposed Plan for Operable Unit 4-12

Central Facilities Area Landfills I, II, and III

and No Action Sites in Operable Unit 4-03

Idaho National Engineering Laboratory

Public Comment Period - April 26 to May 26, 1995

(*Note:* Technical and administrative terms are used throughout this Proposed Plan. When these terms are first used, they are printed in ***bold italics***. Explanations of these terms, document references, and other helpful notes are provided in the margins.)

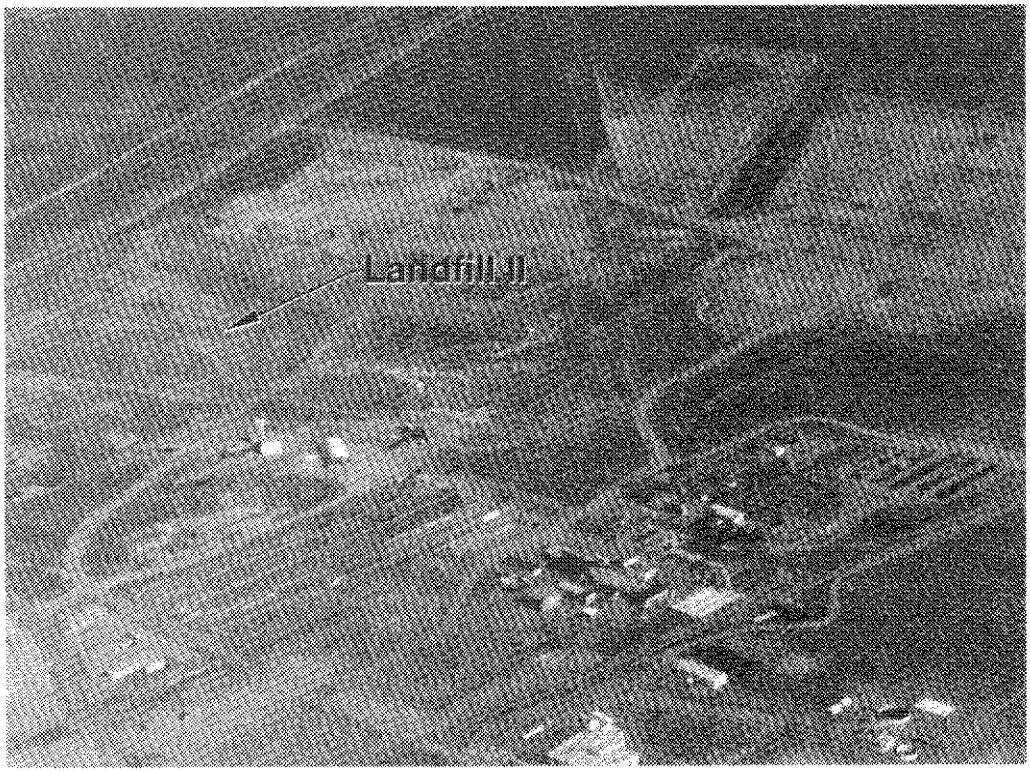

Photo of Landfill II at the Central Facilities Area.

Introduction

One purpose of this ***Proposed Plan*** is to summarize information presented in the *Remedial Investigation/Feasibility Study for Operable Unit 4-12: Central Facilities Area Landfills I, II, and III at the Idaho National Engineering Laboratory* (INEL) and in "No Further Action" documents for 19 sites in Operable Unit 4-03. Another purpose is to seek public comments on remedial action alternatives proposed for the Central Facilities Area Landfills and on the decisions for the "No Further Action" sites. The area is referred to as Operable Unit 4-12; it is comprised of three landfills that were used as recently as 1984. The landfills were intended for disposal of municipal type and industrial wastes generated from INEL operations. The primary reason for this investigation was to determine if contaminants in the landfill wastes pose an unacceptable risk to human health or the environment. As shown in Figure 1, the Central Facilities Area is located in the south-central portion of the INEL.

Inside This Plan

Public Meetings/ Briefings*

Idaho Falls - ***Engineering Research Office Building***
Tuesday, May 16

Boise - ***Earl Chandler Building (Division of Environmental Quality)***
Wednesday, May 17

Moscow - ***Palouse Empire Mall***
Thursday, May 18

Briefings for other communities can be arranged by calling the INEL's toll-free number at (800) 708-2680.

* **See page 18 for details.**

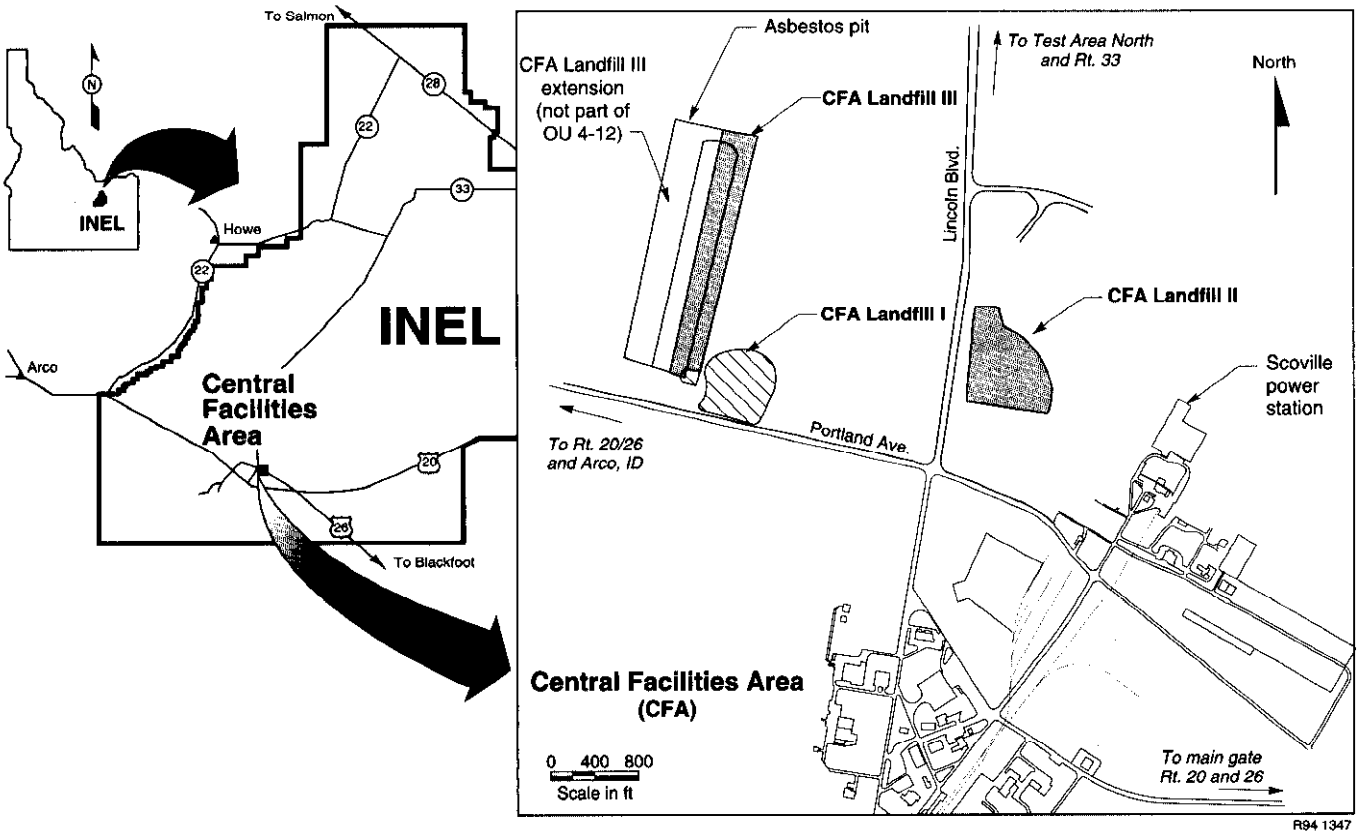

Figure 1. Location of the Central Facilities Area at the Idaho National Engineering Laboratory.

Proposed Plan - document requesting public input on a proposed remedial alternative (cleanup plan).

remedial action alternatives - the options available for a site cleanup.

Administrative Record - documents including correspondence, public comments, Record of Decision, and technical reports upon which the agencies base their remedial action selection.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - a federal law that establishes a program to identify, evaluate, and remediate sites where hazardous substances may have been released, leaked, poured, spilled, or dumped into the environment.

Presumptive Remedy - a cleanup method that has been generally applied and proven to be effective for CERCLA sites with similar characteristics such as landfills.

Containment - a remedy that limits migration of contaminants from a waste site.

This plan outlines the results of the Central Facilities Area Landfills I, II, and III remedial investigation, including the potential risk to human health; summarizes the ***remedial action alternatives*** considered in the feasibility study; and discusses the identification of a preferred alternative. Information summarized in this plan can be found in greater detail in the remedial investigation/feasibility study report for Operable Unit 4-12 in the ***Administrative Record.***

Agency Involvement

The U.S. Department of Energy Idaho Operations Office (DOE), U.S. Environmental Protection Agency Region 10 (EPA), and Idaho Department of Health and Welfare (IDHW) prepared this plan in accordance with public participation requirements identified under Section 117(a) of the ***Comprehensive Environmental Response, Compensation, and Liability Act***, commonly called Superfund. Note that hereinafter, the DOE, EPA, and IDHW will be referred to as "the agencies."

Preferred Alternative

The preferred remedial action alternative for Landfills I, II, and III incorporates appropriate elements of the ***Presumptive Remedy*** of ***Containment*** for CERCLA Municipal Landfill Sites. The preferred alternative is uniform Containment with Native Soil Cover, institutional Controls, and monitoring (hereinafter this alternative is referred to as a Native Soil Cover). Other alternatives considered include: No Action; Institutional Controls with Monitoring; and Containment with Single-Barrier Cover, Institutional Controls, and Monitoring.

The native soil cover alternative is recommended because it is believed to provide the best balance of trade-offs among the alternatives. This alternative would be designed to be protective of human health and the environment and to comply with federal and state regulations. All of the alternatives considered are explained in the section entitled Summary of Alternatives (see page 9).

Community Acceptance

Community acceptance is one of the criteria the agencies must evaluate during the process of selecting a remedy. The way the agencies gauge the degree of community acceptance is to (1) open dialogue with citizens concerning the results of the investigation and (2) encourage citizens to participate by commenting on the remedial alternatives for the Central Facilities Area Landfills I, II, and III project. This interaction is critical to the Superfund process and to making sound environmental decisions.

Although the agencies' prefer the native soil cover alternative, the public is encouraged to review and comment on all of the alternatives, not just the preferred alternative. Details on the alternatives developed for this project can be found in the remedial investigation/feasibility study report for Operable Unit 4-12. Additional information supporting the recommended remedial action is available for review in the Administrative Record file for this project at the INEL Information Repositories listed on page 9.

The actual selection of an alternative cannot be made until after comments received during the public comment period have been reviewed and evaluated. The agencies will consider all public comments on this proposed plan in preparing the ***Record of Decision***. Depending on comments received, the final remedial action plan presented in the Record of Decision could be different from the preferred alternative. All written and verbal comments will be summarized and responded to in the ***Responsiveness Summary*** section of the Record of Decision, which is scheduled to be completed by November 1995.

Site Background

The INEL is an 890-square-mile DOE facility on the Eastern Snake River Plain in southeastern Idaho whose primary mission is the integration of engineering, applied science, and operations in an environmentally conscious, safe, and cost-effective manner. The Eastern Snake River Plain is a relatively flat, semi-arid sagebrush desert. The plain is bounded on the north and west by the Lemhi and Bitterroot Mountain ranges. Drainages around and within the Eastern Snake River Plain recharge the Snake River Plain Aquifer. The top of the aquifer is about 480 feet below the Central Facilities Area and is overlain by basaltic lava flows and interbeds.

Due to confirmed contaminant releases to the environment at the INEL, in November 1989 the INEL was placed on the ***National Priorities List***, which identifies hazardous substance sites requiring investigation. Under Superfund, the risks posed by hazardous substances at National Priorities List sites must be evaluated; appropriate remediation methods would then be implemented if necessary to reduce risks to acceptable levels.

How You Can Participate

Whether you are new to the INEL and are reading this type of document for the first time, or you are familiar with the Superfund process, you are invited to:

- ***Read*** *this proposed plan and review additional documents in the Administrative Record file*
- ***Call*** *the INEL's toll-free number at (800) 708-2680 to ask questions, request information, or make arrangements for a briefing*
- ***Attend*** *a public meeting listed on page 18 and give verbal comments*
- ***Submit*** *written comments (see postage-paid comment form on back cover) by May 26, 1995*
- ***Contact*** *state of Idaho, EPA Region 10, or DOE project managers (see pages 10, 11, and 14).*

Record of Decision - a public document that identifies the selected remedy at a site, outlines the process used to reach a decision on the remedy, and confirms that the decision complies with CERCLA.

Responsiveness Summary - the part of the Record of Decision that summarizes and provides responses to comments received on a proposed action for a site during the public comment period.

National Priorities List - a formal listing of the nation's worst hazardous waste sites as established by CERCLA that have been identified for possible remediation. Sites are ranked by the EPA based on their potential for affecting human health and the environment.

Federal Facility Agreement and Consent Order (FFA/CO) - an agreement between the EPA, state of Idaho, and DOE to evaluate waste disposal sites at the INEL and perform remediation if necessary.

remedial investigation - an environmental investigation that identifies the nature and extent of contamination at a site. Also provides an assessment of the potential risks associated with a site.

feasibility study - an engineering study that provides an analysis of cleanup alternatives based on information gathered during the remedial investigation.

operable unit - an area or areas with distinct characteristics or similar wastes.

Waste Area Group - one of the 10 administrative management areas established under the FFA/CO.

Track 2 (investigation) - a limited field investigation of a site under the FFA/CO, and the associated risk analysis.

This remedial investigation was implemented under a ***Federal Facility Agreement and Consent Order,*** which was signed by the agencies in December 1991. A ***remedial investigation/feasibility study*** and any required cleanup of specific ***operable units*** at the INEL are guided by the Federal Facility Agreement and Consent Order and its associated Action Plan. These documents, negotiated by the agencies, provide procedures and schedules to ensure investigations are conducted in compliance with federal and state environmental laws.

To better manage investigations of potentially contaminated sites, the INEL has been divided into 10 ***Waste Area Groups***. Each Waste Area Group has been divided into operable units to expedite the investigations and any required cleanup actions. Under this management system, Waste Area Group 4 covers the Central Facilities Area. Landfills I, II, and III have been designated as Operable Unit 12 of Waste Area Group 4, and thus are referred to as Operable Unit 4-12. Landfill I was originally designated as Operable Unit 4-10 and was initially investigated under the ***Track 2*** process. Upon conclusion of the Operable Unit 4-10 Track 2 investigation, it was decided that a remedial investigation should be performed on this landfill; consequently, Landfill I was included in Operable Unit 4-12. Further evaluation of potential risks beyond the initial Track 2 investigation was necessary to arrive at a cleanup decision and to determine if potential contaminants from wastes in the landfill could migrate to the underlying Snake River Plain Aquifer.

In August 1992, the agencies initiated a remedial investigation/feasibility study to determine if the existing landfill covers adequately protect human health and the environment. The agencies also wanted to determine if contaminants from wastes buried in the landfills have reached or have the potential to reach the underlying Snake River Plain Aquifer. (All of the risks associated with the Central Facilities Area will be evaluated in the Waste Area Group 4 comprehensive remedial investigation and feasibility study scheduled to begin in 1996.)

Description of Landfills I, II, and III

Landfills I, II, and III began as excavations where wastes (primarily construction-related wastes) from INEL operations were disposed and buried. The landfills are no longer in use and have not received waste since 1984. A soil cover was placed over each of the landfills. Each landfill is discussed in more detail below.

Landfill I

- 8.25 acres
- Waste was buried to an estimated depth of 15 feet
- Waste was covered by 1 to 5 feet of soil

Landfill I

Landfill I covers approximately 8.25 acres (3.3 hectares) where wastes were disposed from the early 1950s until 1984. It is made up of three subunits: the rubble landfill in a former gravel quarry, the western waste trench, and the northern waste trench. No disposal records were kept on the types of wastes disposed to Landfill I. However, based on interviews with former landfill workers, wastes included construction debris, paper, cafeteria garbage, and other solid and liquid wastes typically found in municipal landfills. Wastes such as wood, paper, and flammable materials disposed to Landfill I were typically disposed by open burning of the materials in the trenches. Metals and small amounts of liquid wastes were also disposed.

Although no formal records were kept of the types and quantities of wastes disposed, interviews with former landfill employees indicate that some materials such as paint, chemicals, heavy metals, and sludge were disposed to Landfill I. There is a significant

degree of uncertainty associated with the types and volumes of wastes disposed. Flammable liquids such as oil and solvents were sometimes used to assist burning of wastes, however, the actual quantities of these liquids are unknown. Paper waste was also burned in a specially designed incinerator located at the landfill. Ashes from the incinerator were disposed in the rubble landfill. Although not intended for disposal of radioactive-contaminated materials, it is possible that infrequent, inadvertent disposal occurred. When disposal of waste at the landfill ceased, with waste buried to an estimated depth of 15 feet (5 meters), it was covered with 1 to 5 feet (0.3 to 1.5 meters) of native soils.

More INEL Information

General information concerning INEL's mission and its major programs can be found in INEL Information Repositories. Visit one of the repositories or call (800) 708-2680 to ask about INEL activities or request background information.

Landfill II

Landfill II is a former gravel quarry where wastes were disposed over an area of approximately 15 acres (6 hectares). Disposal of wastes started in 1972 and continued until 1982. At the time Landfill II began accepting wastes, DOE also began the Non-radioactive Industrial Waste Information System, a records system to categorize solid and liquid waste types and volumes disposed to Landfill II. The types and volumes of wastes recorded in the system are summarized below. There is, however, some uncertainty associated with these records because the types and volumes of wastes may not have been thoroughly assessed or recorded at the time of disposal.

Approximately 95% of the solid wastes disposed in Landfill II consisted of trash and sweepings, cafeteria garbage, wood and scrap lumber, and masonry/concrete. Much of the remaining 5% of solid waste consisted of weeds, grass, dirt, gravel, asphalt, asbestos, and other waste building materials. Metals and small amounts of liquid wastes consisting of waste oil sludge, solvents, paint, paint thinner, and chemicals were also disposed in the landfill. Interviews with former landfill employees were conducted to determine the disposal methods and operations used at the landfill. Normal landfill operations consisted of disposal of wastes at the edge of the excavation and compaction using heavy equipment. After compaction, the waste was covered with at least 6 to 8 inches (0.15 to 0.20 meters) of soil each day. When disposal of waste at the landfill ceased, with waste compacted to an average depth of 16 feet (5 meters), it was covered with 0.3 to 3 feet (0.1 to 1 meter) of soil.

Landfill II

- 15 acres
- Waste was buried to an average depth of 16 feet
- Waste was covered with 4 inches to 3 feet of soil

Landfill III

The portion of Landfill III included in this investigation (see Figure 1), covering approximately 12 acres (5 hectares), accepted wastes from 1982 to 1984. During this period, waste was placed and compacted into six trenches, which measured approximately 24 feet wide, 12 feet deep, and 2,400 feet long (7.3 x 3.7 x 732 meters). Heavy equipment was used to compact waste placed in the trenches and cover it daily with a layer of soil. The Landfill III extension (see Figure 1), which accepted waste until 1993, is not included in this investigation.

Records taken from the Non-radioactive Industrial Waste Information System were used to determine the types and volumes of wastes disposed in Landfill III. Approximately 96% of the solid wastes disposed in Landfill III consisted of trash and sweepings, cafeteria garbage, wood and scrap lumber, and masonry/concrete. Much of the remaining 4% of solid waste consisted of weeds, grass, dirt, gravel, asphalt, asbestos, and other waste building materials. Liquid wastes such as waste asphalt and paint were also disposed in the landfill. When disposal of waste at the landfill ceased, with waste compacted to an average depth of 13 feet (4 meters), the waste was covered with 1 to 4 feet (0.3 to 1.2 meters) of soil.

Landfill III

- 12 acres
- Waste was buried to an average depth of 13 feet
- Waste was covered with 1 to 4 feet of soil

Summary of the Remedial Investigation

Several field investigations were performed to determine if contaminants from wastes disposed in Landfills I, II, and III have moved away from the original areas of disposal. Several potential pathways of exposure were considered in planning the types of data needed. The pathways considered were (1) surface water run-on/run-off, which may carry potential contaminants away from the surface of the landfills; (2) airborne contamination caused by landfill gas generation and windblown surface contaminants; (3) direct contact with landfill soil covers, which may contain contaminants from the landfill waste; and (4) leaching of potential contaminants from the landfill waste to the Snake River Plain Aquifer.

Activities conducted during the remedial investigation included soil cover investigations, soil vapor surveys, soil sampling, groundwater sampling of Snake River Plain Aquifer monitoring wells, and a waste inventory records investigation. Data collected from each landfill and the groundwater investigation are summarized below.

Landfill I

Soil samples were collected from the surface cover of the landfill at 10 locations, in some cases down to depths of 2.5 feet (0.8 meters). No samples were collected from the waste contained within the landfill. Beryllium, benzo(a)pyrene, and cobalt-60 were detected at low concentrations in the surface cover. ***Volatile organic compounds*** were detected at very low concentrations at the surface. Methane was not detected as an air emission from the surface soil, indicating that significant decomposition of organic waste in the landfill is likely not occurring.

volatile organic compounds - a group of ***organic compounds*** that have a tendency to vaporize readily. (Examples: carbon tetrachloride, trichloroethylene, and benzene.)

Landfill II

Air and soil vapor samples were collected from the existing surface soil cover, from the air immediately above the cover, and from boreholes through the waste. Volatile and ***semi-volatile organic compounds*** were detected at low concentrations in the surface soil cover of the landfill. Volatile organic compounds were detected at low concentrations in the air immediately above the surface cover. Soil vapor samples collected from within and beneath the waste indicated the presence of volatile organic compounds at low concentrations.

semi-volatile organic compounds - a group of ***organic compounds*** that are easily able to be extracted from soil, water, etc., using an organic solvent.

organic compounds - chemical substances containing primarily carbon and hydrogen.

Soil samples were collected from the existing surface soil cover and from boreholes through the waste. Volatile and semi-volatile organic compounds were detected at low concentrations in soil samples collected from the waste. Samples were collected from boreholes drilled into the landfill primarily to determine if any leachate was present in or below the landfill waste. No leachate was discovered during the drilling operations. Although no leachate was encountered, soil moisture monitoring of the vadose zone indicates localized points of deep drainage have occurred. Although not specifically identified as leachate, this type of soil moisture movement only indicates a mechanism for leachate migration exists and does not appear to be a significant contributor to potential contaminant migration.

Methane was found in some of the boreholes drilled during a 1988 investigation in concentrations above the ***lower explosive limit*** of 50,000 parts per million (ppm). Methane was also detected in the waste in three of nine boreholes that were drilled in

lower explosive limit - the minimum concentration of a combustible gas (e.g., methane) or vapor in air that will propagate flame on contact with an ignition source.

the 1993 investigation, but concentrations were well below the lower explosive limit. Methane was not detected emanating from the surface of the landfill. The presence of methane in the landfill is the result of decomposition of organic materials such as cafeteria garbage, which is known to have been disposed to the landfill.

Landfill III

The field investigation at Landfill III was similar to that at Landfill II, except that no new boreholes were drilled at Landfill III. Soil and vapor samples were collected from the surface soil covers and from the air immediately above the cover. Vadose zone monitoring at Landfill III indicated the possible presence of leachate; however, it appears to be a spatially variable, localized phenomenon, which would not be a significant contributor to potential contaminant migration.

No volatile organic compounds were detected in the surface soil cover. One semivolatile organic compound, Bis (2-ethylexyl) phthalate at 0.036 mg/kg, was detected at low concentrations in a sample from one of the locations but is considered to be a contaminant introduced during laboratory operations. Metals were detected in the cover of the landfill in concentrations below background levels.

Soil vapor samples from boreholes drilled during a previous investigation in 1988 indicate the presence of volatile organic compounds at low concentrations. Volatile organic compounds were also detected at low concentrations in the air immediately above the surface cover. Methane was detected in two of the five boreholes in concentrations well below the lower explosive limit. Methane was not detected emanating from the surface of the landfill, which likely indicates that limited decomposition of organic materials is occurring.

Groundwater Investigation and Potential Impacts to the Snake River Plain Aquifer

One purpose of the remedial investigation/feasibility study was to determine if the landfills may have leached contaminants to the Snake River Plain Aquifer. Three sets of water samples were collected from upgradient and downgradient groundwater monitoring wells in the vicinity of the landfills over a period of six months. If contaminants are detected in downgradient monitoring wells in higher concentrations than in the upgradient wells, it is possible that the source is the landfills. Data from samples collected from some of the groundwater monitoring wells near the landfills indicate the presence of beryllium and cadmium above the ***maximum contaminant levels***. Zinc was detected in the downgradient wells above ***risk-based concentrations***. However, inconsistencies and quality problems in the data indicate that the metals results may be false positives. As a result, uncertainty exists with determining whether or not the landfills are the source of metals in groundwater samples collected from these wells. Low levels of volatile organic compounds were also detected in the monitoring wells. Concentrations detected are similar to local historical concentrations found in the Snake River Plain Aquifer and appear to be unrelated to the Central Facilities Area landfills.

maximum contaminant level (MCL) - the maximum concentration of a contaminant allowed in a public drinking water system under the Safe Drinking Water Act.

risk-based concentrations - concentrations of specific compounds that may cause adverse health effects. Many of these contaminant concentrations are published by the EPA.

Potential for Movement of Contaminants

Air modeling was performed using soil vapor data collected from the surface covers of the landfills to estimate the concentration of contaminants in air that may be carried

from the surface covers to the boundaries of the landfills. The contaminants modeled from the surface of the three landfills result in air concentrations at the landfill boundaries that are below risk-based concentrations.

Summary of Site Risks

baseline risk assessment - an assessment required by CERCLA to evaluate potential risks to human health and the environment. This assessment estimates risks/hazards associated with existing and/or potential human and environmental exposures to contaminants at an area, assuming no remedial action is taken.

A Baseline Risk Assessment was conducted to evaluate current and future potential risks to human health and the environment associated with contaminants found at the landfills. Data obtained during the remedial investigation were used along with the computer modeling to conduct the ***baseline risk assessment.***

Contaminants of Concern

No contaminants of concern were identified above the acceptable risk range in surface soils. Contaminants of concern in the groundwater are beryllium, cadmium, and zinc; these were detected in samples from some of the monitoring wells. However, their source and concentrations cannot be confirmed with data currently available due to the possible false positives mentioned above.

Human Health Evaluation

A human health evaluation was performed which quantifies both noncarcinogenic health effects and carcinogenic risks. Health risks were calculated for a current industrial scenario where it is assumed that the workers incidentally ingest soil from the landfills and ingest water from the production wells, which are considered to be downgradient of Landfill II. Health risks were also calculated for a future residential scenario where it is assumed that the residents incidentally ingest soil from the cover of Landfill II and ingest groundwater pumped from monitoring and production wells.

None of the contaminants detected as a result of data collection efforts during the remedial investigation (that may also be attributable to the landfills) exceeded acceptable risk values, with the exception of ingestion of groundwater under the future residential scenario. Under this scenario, ingestion of groundwater contaminated with beryllium posed a calculated risk of 2 in 10,000 increased risk of contracting cancer for individuals exposed to this contaminant over an extended period of time. The National Contingency Plan establishes an acceptable risk range for excess cancer incidences of between 1 in 10,000 and 1 in 1,000,000. This calculated risk, however, is based on data with inconsistencies and data quality problems that indicate the metals results may be anomalies or false positives.

Ecological Risks

Ecological risks were evaluated to provide a broad overview of potential exposure of landfill contaminants to the local ecosystem. The lack of water, vegetation, and habitat for wildlife in the area of the Central Facilities Area Landfills is likely to limit exposure. This information will be incorporated into a Waste Area Group-wide risk assessment to determine the potential cumulative impacts to the environment from all areas in Waste Area Group 4.

Remedial Action

Although a baseline risk assessment of the landfills does not clearly identify any unacceptable risks, there is substantial uncertainty associated with the types and volumes of wastes disposed to the landfills. Furthermore, it is impractical to fully characterize the landfills' contents with data collection efforts because of the unsorted placement of wastes into landfills, which is typical (of landfills) during disposal. Therefore, data collected from boreholes into the waste may not be representative of the waste itself. The substantial uncertainty identified above and the presumed unacceptable risk associated with contaminants in the landfills warrant remedial action. Because the risk assessment also did not identify any localized areas of unacceptable risk that would support the need for a treatment remedy, a presumptive remedy type of approach is appropriate. Remedial action at this operable unit is consistent with EPA's presumptive remedy of containment for CERCLA municipal landfill sites. Containment will limit exposure to landfill wastes, as well as minimize potential migration of contaminants.

Remedial Action Objectives

The overall remedial action objectives are designed to protect human health and the environment from potential adverse effects related to the CFA landfills. The remedial action objectives for this operable unit are:

- Prevent direct contact with the landfill contents,
- Ensure that drinking water standards are not exceeded in the Snake River Plain Aquifer due to the migration of contaminants from these landfills, and
- Comply with all applicable or relevant and appropriate requirements.

Summary of Alternatives

The feasibility study conducted for this operable unit provides a detailed analysis of alternatives that meet the remedial action objectives. A screening process was used to evaluate each alternative's effectiveness at achieving the stated remedial action objectives and its ability to be implemented at the site. The screening process resulted in the selection of four remedial action alternatives that were sufficiently distinct, implementable, and effective. The alternatives considered are:

Alternative 1: No Action with Monitoring (evaluation of the "no action" alternative is required by law)

Alternative 2: Institutional Controls with Monitoring

Alternative 3: Uniform Containment with Native Soil Cover, Institutional Controls, and Monitoring

Alternative 4: Containment with Single-Barrier Cover, Institutional Controls, and Monitoring.

Alternatives 2, 3, and 4 involve remedial actions and must address ***Applicable or Relevant and Appropriate Requirements*** (ARARs). The primary ARARs for these alternatives, listed below, are taken from the Idaho Administrative Procedures Act (IDAPA), which incorporate by reference the corresponding sections of the Code of Federal Regulations (CFR).

INEL Information Repositories

INEL Technical Library
DOE-ID Public Reading Room
1776 Science Center Drive
Idaho Falls, ID 83415
(208) 526-1185

Pocatello Public Library
812 East Clark
Pocatello, ID 83201
(208) 232-1263

Shoshone-Bannock Library
HRDC Building
Bannock and Pima Streets
Fort Hall, ID 83202
(208) 238-3882

INEL Boise Office
816 West Bannock, Suite 306
Boise, ID 83702
(208) 334-9572

University of Idaho Library
University of Idaho Campus
Moscow, ID 83843
(208) 885-6344

Select documents will be included in the following locations:

Boise Public Library
715 South Capitol Blvd.
Boise, ID 83702
(208) 384-4076

Twin Falls Public Library
434 2nd Street East
Twin Falls, ID 83301
(208) 733-2964

Idaho Falls Public Library
457 Broadway
Idaho Falls, ID 83402
(208) 526-1450

INEL Regional Office

INEL Boise Office
816 West Bannock, Suite 306
Boise, ID 83702
(208) 334-9572

Applicable or Relevant and Appropriate Requirements (ARARs) - "Applicable" requirements mean those standards, criteria, or limitations promulgated under federal or state law that are required specific to a substance, pollutant, contaminant, action, location, or other circumstance at a CERCLA site. "Relevant and Appropriate" requirements mean those standards, requirements, or limitations that address problems or situations sufficiently similar to those encountered at the CERCLA site such that their use is well suited to that particular site.

IDAHO DEPARTMENT OF HEALTH AND WELFARE

DIVISION OF ENVIRONMENTAL QUALITY

The **Idaho Department of Health and Welfare** is one of the three agencies identified in the Federal Facility Agreement, which establishes the scope and schedule of remedial investigations at the INEL. Project correspondence by the Division of Environmental Quality staff can be found in the Administrative Record for this project under Operable Unit 4-12.

For additional information concerning the state's role in preparing this proposed plan, contact:

Dean Nygard
Idaho Department of Health and Welfare
Division of Environmental Quality
1410 N. Hilton
Boise, ID 83706
(208) 334-5860, (800) 232-4635

Alternative 1

No Action with Monitoring:

- Wastes would remain in place
- Groundwater monitoring would take place for 30 years if deemed appropriate (at least five years); decision would be reviewed every five years
- Cost rounded to $968,000

Alternative 2

Institutional Controls with Monitoring:

- Wastes would remain in place
- Groundwater monitoring would take place for 30 years if deemed appropriate (at least five years); decision would be reviewed every five years
- Fences would be constructed and access restricted
- Cost rounded to $1,940,000

- Subpart F - Landfills: Closure and post-closure care, Idaho Code 39-7401 through 7420 (40 CFR 258.60-61).
- Subpart N - Landfills: Closure and post-closure care, IDAPA § 16.01.05.008 (40 CFR 264.310).

Alternative 1: No Action with Monitoring

Under this alternative, no attempt would be made to further contain the contents of the landfills. The only action would be groundwater monitoring conducted for a period of 30 years (if deemed appropriate during the five-year reviews described below) after the signing of the Record of Decision for Operable Unit 4-12. Groundwater monitoring would be conducted to determine whether or not the landfills had leached contaminants to the aquifer. A decision would be made by the agencies at the end of every five-year monitoring interval, based upon the data collected during that interval, to determine whether or not monitoring should continue. As a minimum, groundwater monitoring would entail sampling of the nine monitoring wells sampled during the remedial investigation. Samples would be analyzed for a suite of potential contaminants. Access to the site and subsequent exposure to site surface soils would not be restricted under this alternative beyond the period in which DOE maintains control of the landfill areas (assumed to be 30 years).

Although the cost of this action includes monitoring for 30 years, the actual period of time for groundwater monitoring will be based upon sufficient data necessary to establish a trend and to ensure the remedy continues to be protective of human health and the environment. A monitoring plan will be developed for this purpose.

Alternative 2: Institutional Controls with Monitoring

Alternative 2 would include long-term groundwater monitoring as described under Alternative 1 and would add institutional controls. Institutional controls are legal restrictions on access, and fencing, which would be implemented after DOE's institutional control period (30 years). This would restrict access to the site and future disturbance of the site soils. Monitoring of the existing soil cover and waste would also be conducted. This alternative takes no steps to minimize the potential for contaminant migration.

Alternative 3: Uniform Containment with Native Soil Cover, Institutional Controls, and Monitoring

This alternative would ensure a total of at least 2 feet (0.6 meters) of clean, compactible, native (i.e., found at or near the INEL) soils cover the entire surface areas of the landfills. This cover of native soil would prevent surface exposure to contaminants in the landfill areas. The cover would also be constructed to restrict migration of the contaminants from the waste and dust emissions or runoff erosion from the surface cover. The soil layer would be graded to allow efficient rainwater runoff, and natural vegetation would be planted to stabilize the soil surface. Native soils which can achieve the permeability requirements specified in Idaho Code 39-7401 through 7420 (40 CFR 258.60-61) would also limit infiltration into the landfill waste. Existing soil cover material and additional material would be incorporated in the final 2-foot cover thickness. It is expected that up to 55,000 cubic yards (42,050 cubic meters) of native soil would have to be brought to the landfills from a source at the INEL in order to accomplish the appropriate grading and cover thickness. Long-term maintenance, including inspections and patching of the landfill cover, is included in this alternative.

A deed restriction would be obtained for the landfill area and a 50-foot (15-meter) buffer zone around each landfill boundary. The restriction would limit the sale and use of the property.

Borders would be delineated through the posting of signs warning of the landfill's existence and potentially contaminated soils. This type of cover would be designed to limit infiltration and at the same time ensure that the landfill gases, primarily methane, would diffuse through the cover into the air and not be a significant concern. Long-term groundwater monitoring as described for Alternative 1 would be implemented under Alternative 3.

Alternative 4: Containment with Single-Barrier Cover, Institutional Controls, and Monitoring

This alternative would involve placing a single-barrier cover over the entire surface of each of the landfills. The cover would be constructed of either 2 feet (0.6 meters) of impermeable clay or a geomembrane layer (for purposes of evaluation, it was assumed that a clay layer would be used with the clay being a mixture of imported bentonite and native soils). Prior to placement of the clay layer, the landfill area would be surveyed to ensure a minimum thickness of 1 foot (0.3 meters) of compacted native soil bedding layer was in place. After placing and compacting the clay layer, a layer of native soil 2.5 feet (0.8 meters) thick would be placed on top of the clay and natural vegetation would be planted to stabilize the soil surface. This impermeable type of cover would prevent surface exposure to contaminants in the landfill areas as well as greatly reduce the potential for water infiltration through the landfill contents. As with the native soil cover described in Alternative 3, this cover would prevent migration of contaminants from dust emissions or runoff erosion. The top native soil cover would be graded to allow efficient rainwater runoff. Long-term maintenance, including inspections and patching of the landfill cover, is included.

A deed restriction and posting of signs would be included with this alternative as described for Alternative 3, and long-term groundwater monitoring implemented as described for Alternative 1. Soil vapor monitoring would also be a component of this alternative. Because the cover would include an impermeable layer over the landfill contents, landfill gas could potentially accumulate to unsafe levels. Soil vapor monitoring would provide early indication of such an accumulation of gases. This monitoring could be reduced or eliminated over time if the landfill gas levels remain low. If gases were to accumulate to unsafe levels, then vents could be installed.

Evaluation of Alternatives

Each of the alternatives subjected to detailed analysis was evaluated using eight of the nine evaluation criteria identified under Superfund. Brief definitions and the categorization of all nine criteria are provided in the sidebar. The ninth criterion, community acceptance, will be evaluated when public response to this proposed remedial action for Landfills I, II, and III is received.

Each alternative must meet the threshold criteria to be considered for selection as the preferred remedial action alternative. Evaluations against the eight evaluation criteria are summarized in the following sections.

The **U.S. Environmental Protection Agency** is one of the three agencies identified in the Federal Facility Agreement, which establishes the scope and schedule of remedial investigations at the INEL. Correspondence by the Region 10 staff concerning this project can be found in the Administrative Record under Operable Unit 4-12.

For additional information concerning the EPA's role in preparing this proposed plan, contact:

Wayne Pierre
Environmental Protection Agency
Region 10
1200 Sixth Avenue
Seattle, WA 98101
(206) 553-7261

Alternative 3

Uniform Containment with Native Soil Cover, Institutional Controls, and Monitoring:

- Wastes would remain in place
- Soil cover would be placed over surface of landfills
- Deed restriction would restrict future sale and use of property
- Groundwater monitoring would take place for 30 years if deemed appropriate (at least five years); decision would be reviewed every five years
- Cost rounded to $3,501,000

Alternative 4

Containment with Single-Barrier Cover, Institutional Controls, and Monitoring:

- Wastes would remain in place
- Impermeable cover would be placed over surface of landfills
- Deed restriction would restrict future sale and use of property
- Groundwater monitoring would take place for 30 years if deemed appropriate (at least five years); decision would be reviewed every five years
- Cost rounded to $15,212,000

Evaluation Criteria

Threshold Criteria:

1. **Overall Protection of Human Health and the Environment** addresses whether a remedy provides adequate protection of human health and the environment and describes how risks posed through each exposure pathway are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.
2. **Compliance with Applicable or Relevant and Appropriate Requirements** (ARARs) addresses whether a remedy will meet all of the ARARs under federal and state environmental laws and/or justifies a waiver.

Balancing Criteria:

3. **Long-term Effectiveness and Permanence** refers to expected residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup goals have been met.
4. **Reduction of Toxicity, Mobility, or Volume through Treatment** addresses the degree to which a remedy employs recycling or treatment that reduces the toxicity, mobility, or volume of the contaminants of concern, including how treatment is used to address the principal threats posed by the site.
5. **Short-term Effectiveness** addresses any adverse impacts on human health and the environment that may be posed during the construction and implementation period and the period of time needed to achieve cleanup goals.
6. **Implementability** is the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement a particular option.
7. **Cost** includes estimated capital and operation and maintenance costs, expressed as net present-worth costs.

Modifying Criteria:

8. **State Acceptance** reflects aspects of the preferred alternative and other alternatives that the state favors or objects to, and any specific comments regarding state ARARs or the proposed use of waivers.
9. **Community Acceptance** summarizes the public's general response to the alternatives described in the Proposed Plan and in the remedial investigation/feasibility study, based on public comments received.

Overall Protection of Human Health and the Environment

Alternatives 2, 3, and 4 are considered to be protective of human health and the environment; however, Alternative 4 provides the greatest overall protection of human health and the environment. Alternative 1 is not considered protective of human health and the environment.

Compliance with Applicable or Relevant and Appropriate Requirements

Alternatives 3 and 4 would meet all action-specific ARARs including Idaho Code 39.7401 through 7420 (40 CFR 258.60-61) and IDAPA § 16.01.05.008 (40 CFR 264.310). Neither Alternative 1 nor Alternative 2 meets the threshold criteria without an ARAR waiver, and therefore will not be considered further in this evaluation.

Long-Term Effectiveness and Permanence

Alternative 4, with its impermeable layer, provides the greatest level of long-term effectiveness and permanence. Both alternatives 3 and 4 include institutional controls and long-term maintenance, including inspections and patching of the landfill cover. Long-term effectiveness not only depends on the durability of the cover, but also on the ability to implement and enforce deed restrictions, and continue maintenance and monitoring.

Reduction of Toxicity, Mobility, or Volume Through Treatment

No treatment alternatives were considered because no "hot spots" (which would require special treatment technology) were identified in the landfills.

Short-Term Effectiveness

Alternative 3 ranks higher than Alternative 4 for short-term effectiveness. Potential short-term risks under Alternative 3 and 4 would include conventional construction risks associated with heavy equipment operation supporting earth moving activities. Additional risk to workers is incurred with Alternative 4 due to transportation of additional soil materials (especially clay from off-INEL sources) and additional construction activities. However, proper engineering controls along with personal protective equipment would reduce the potential for construction workers to be exposed to unsafe contaminant levels and other risks.

Implementability

Alternative 3 ranks higher than Alternative 4 in the area of implementability because it is less complex. The soil covers for both Alternatives 3 and 4 have proven reliability in the containment of landfill contents.

Cost

Table 1 compares the estimated cost for each action alternative with the cost for the no action alternative. These cost estimates, in present dollar value, include construction costs, maintenance of the covers, and annual post-closure costs. While Alternative 4 slightly increases overall protection of human health and the environment, the cost is significantly higher than that of Alternative 3. Alternative 3 ranks higher than Alternative 4 because the remedial action objectives are achieved at a significantly lower cost.

Table 1. Cost Summary for Landfills I, II, and III.

Cost elements	Alternative 1, No Action	Alternative 3, Containment with Native Soil Cover	Alternative 4, Containment with Single Barrier Cap
Cost Elements			
Groundwater well and modifications	$152,000	$152,000	$152,000
Landfill monitoring probes	0	54,000	54,000
Fencing	0	0	0
Capping materials	0	0	2,859,000
Bentonite soil blending	0	0	163,000
Soil cover	0	632,000	2,048,000
Surveying	0	4,000	9,000
Site improvements	0	62,000	62,000
Overhead and profit	41,000	244,000	1,444,000
Construction management	29,000	172,000	1,019,000
Engineering design and inspection	16,000	92,000	543,000
Project management	23,000	138,000	815,000
Contingency	78,000	467,000	2,750,000
Total capital costs	$339,000	$2,017,000	$11,918,000
Annual post closure costs			
Groundwater monitoring	$27,000	$27,000	$27,000
Soil cover monitoring	0	34,000	33,000
Soil vapor monitoring	0	0	77,000
Revegetation	0	3,000	3,000
Project management	3,000	7,000	17,000
Contingency	9,000	21,000	47,000
Total annual post closure costs	$39,000	$92,000	$204,000
Total post closure costs (30 years at 5% discount rate)	$629,000	$1,484,000	$3,294,000
Total cost			
Total cost elements	$339,000	$2,017,000	$11,918,000
Total annual post closure costs	629,000	1,484,000[a]	3,294,000[a]
Total cost of alternative	$968,000	$3,501,000	$15,212,000

a. Represents monitoring and revegetation for 30 years at a 5% discount rate.

All costs represent 1994 dollars with a 5% annual inflation rate and rounded to thousands.

Alternative 2, with a total cost of $1,940,000, is not included in this table because it does not meet a threshold criterion without an ARAR waiver. Alternative 1 is included for comparison as required.

Written comments can be submitted to the ***U.S. Department of Energy Idaho Operations Office****, and addressed to:*

Mr. Jerry Lyle
Acting Deputy Assistant Manager
Office of Program Execution
P.O. Box 2047
Idaho Falls, ID 83403-2047

For additional information regarding the Environmental Restoration Program at the INEL, call Reuel Smith at (208) 526-6864, or call (800) 708-2680.

State Acceptance

The Idaho Department of Health and Welfare (IDHW) has been involved in preparing this Proposed Plan. The Proposed Plan is issued with concurrence of the IDHW.

Summary of the Preferred Alternative

The preferred remedial alternative for Landfills I, II, and III is Alternative 3: Uniform Containment with Native Soil Cover, Institutional Controls, and Monitoring. The agencies believe that this alternative satisfies the statutory requirements of CERCLA Section 121(b). This alternative is protective of human health and the environment, complies with ARARs, provides short- and long-term effectiveness, is readily implementable, and is cost-effective. Alternative 3 focuses on constructing a native soil cover and implementing institutional controls. This would reduce human exposure by preventing direct contact with and exposure to contaminants at the landfills and by reducing the potential for future contaminant migration.

A groundwater monitoring program would be established during the remedial design/ remedial action phase of this project. The monitoring program would be designed to determine if contaminants in the landfills are leaching to the groundwater and to support a response action if any migration is identified.

No Action Sites

The following sections of this Proposed Plan summarize information and seek comment on 19 sites of former underground storage tanks. The agencies propose that no further action be taken at these sites.

The sites discussed below are considered to be low probability hazardous sites under the FFA/CO and as such are investigated under the Track 1 process. The Track 1 process involves collecting and interpreting existing data to determine whether the site poses an unacceptable risk to human health or the environment. The information is presented in a decision document for each site. Detailed information for each of these sites can be found in the "Central Facilities Area Waste Area Group 4, Track 1 Sites" Administrative Record binder, located in the INEL Information Repositories (see page 9).

Underground Storage Tanks at WAG 4

The following 19 underground storage tank sites are included in Operable Unit 4-03 and were evaluated as Track 1 investigations under the FFA/CO. Except where noted, all of the tanks, their contents, and associated piping have been removed. All of the tank sites have been backfilled with soil and restored for unrestricted use. In many cases, the tank and associated piping have been recycled as scrap metal.

Several of the tank sites had petroleum-related organic contamination (i.e., including benzene, toluene, ethylbenzene, and xylene) in the soil in the bottom of the excavation. In each case, a risk evaluation determined that the soil concentration for these contaminants did not exceed the 1 in 1,000,000 risk-based concentrations for inhalation of volatile organic compounds and dust, ingestion of soil, and ingestion of groundwater.

CFA-18, Fire Department Training Area, Gasoline Storage Tank.

This is a 500-gallon (1,893-liter) gasoline tank installed in 1952 which is still in use (and is thus subject to appropriate rules and regulations for ongoing operations). No leakage was observed from the tank during tightness testing performed in March 1993. Also, no contaminants have been observed near the tank. Based on this investigation of potential past releases from the tank, no further action is recommended.

CFA-19, Fuel Tanks at CFA-606.

This is the site of two former 10,000-gallon (37,850-liter) fuel tanks installed in 1948 and last used in 1950. Tanks CFA 606-E1 and -E2 were used to store gasoline and diesel fuel, respectively, for unknown purposes. All attempts to locate the tanks and associated piping (with a ground-penetrating radar and metal detector) were unsuccessful and there was no visible evidence of excavated areas or piping to the tanks. It is believed the tanks have been removed and the areas have been backfilled. According to records, no tank content or soil samples were collected at this site because the tanks were not located.

CFA-20, Fuel Oil Tank at former CFA-609 (near current CFA-612).

This is the site of a former 275-gallon (1041-liter) fuel tank installed in 1952 and last used in 1985. The tank was used to store fuel oil for heating building CFA-609, which was demolished and replaced by the current CFA-612 and an adjacent asphalt parking lot. Although no written record of removal was found, there was reference to a letter stating that the tank had been excavated. Also, an equipment operator who worked on demolition of the old CFA-609 indicated that the tank had been removed and the excavation backfilled about 1985 or 1986. No tank content sampling or soil sampling records could be found.

CFA-21, Fuel Tank at Nevada Circle 1 (South by CFA-629).

This is a former 500-gallon (1,892-liter) gasoline tank installed in 1958 and last used in 1970. The tank and associated piping were excavated and removed from the ground in May 1991. During removal operations, the tank was inadvertently punctured by excavation equipment resulting in a spill of approximately 75 gallons (284 liters) of diesel fuel in the excavation. Contaminated soil was removed from the excavation and treated. Approximately 60 gallons (227 liters) of spilled fuel were retrieved and 15 gallons (57 liters) absorbed into soil resulting in high concentrations of total petroleum hydrocarbons in two soil samples (20,000 and 54,000 milligrams/kilogram). However, because the volume of spilled fuel is low and total petroleum hydrocarbons are relatively immobile in the soil, further sampling was not conducted. All other contaminants detected in the excavation beneath the tank were below the 1 in 1,000,000 risk-based concentrations.

CFA-23, Fuel Oil Tank at CFA-641.

This is a former 55-gallon (208-liter) fuel oil tank installed in 1949 and last used in 1975. The tank and associated piping were excavated and removed from the ground in October 1990. No holes in the tank or piping or other evidence of leakage were observed during removal operations. No contaminants were detected at levels that exceed the 1 in 1,000,000 risk-based concentrations.

CFA-24, Heating Fuel Tank near CFA-629.

This is a former 500-gallon (1893-liter) heating fuel tank installed in 1958 and last used in 1970. The tank (no associated piping was found) was excavated and removed from the ground in May 1991. No holes in the tank or other evidence of leakage was observed during removal operations. No contaminants were detected at levels that exceed the 1 in 1,000,000 risk-based concentrations.

CFA-25, Fuel Oil Tank at CFA-656.

This is a former 500-gallon (1,893-liter) fuel oil tank installed in 1944 and last used in 1960. The tank and associated piping were excavated and removed from the ground in October 1990. No evidence of leakage was observed from the tank or associated piping during removal operations. No contaminants were detected in the excavation beneath the tank above the 1 in 1,000,000 risk-based concentrations.

CFA-27, Fuel Oil Tank at CFA-669 (CFA-740).

This is a former 15,000-gallon (55,775-liter) fuel oil tank installed in 1953 and last used in 1981. The tank and associated piping were excavated and removed from the ground in October 1990. Evidence of leakage from the piping was observed during removal operations; however, there was no evidence of leakage from the tank. Contaminated soil was removed and treated. No contaminants were detected in the excavation beneath the former tank or piping above the 1 in 1,000,000 risk-based concentrations.

CFA-28, Fuel Oil Tank at CFA-674 (West).

This is a former 1,000-gallon (3,785-liter) fuel oil tank installed in 1956 and last used in 1968. The tank was excavated and removed from the ground in September 1992. No evidence of leakage was observed from the tank during removal operations. No contaminants were detected in the excavation beneath the tank above the 1 in 1,000,000 risk-based concentrations.

CFA-29, Waste Oil Tank at CFA-664.

This is a former 1,000-gallon (3,785-liter) waste oil tank installed in 1951 and last used in 1989. The tank and associated piping were excavated and removed from the ground in October 1990 after it failed a tightness test. Soil contamination observed in the excavation was removed and treated. No contaminants were detected in the excavation beneath the tank above the 1 in 1,000,000 risk-based concentrations.

CFA-30, Waste Oil Tank at CFA-665.

This is a former 1,000-gallon (3,785-liter) waste oil tank installed in 1960 and last used in 1989. The tank and associated piping were excavated and removed from the ground in September 1989 after it failed a tightness test. Soil contamination observed in the excavation was removed and treated. No contaminants were detected in the excavation beneath the tank above the 1 in 1,000,000 risk-based concentrations.

CFA-31, Waste Oil Tank at CFA-754.

This is a former 15,000-gallon (15,775-liter) tank used as bulk storage of waste oil. The date of installation is unknown, however it was last used in 1985. The tank and associated piping were excavated and removed from the ground in May 1992. Contaminated soil observed in the excavation during removal operations was removed and treated. After removal of contaminated soil, no contaminants were detected in the excavation beneath the tank above the 1 in 1,000,000 risk-based concentrations.

CFA-32, Fuel Oil Tank at CFA-667 (North Side).

This is a former 180-gallon (680-liter) fuel oil tank last used in 1986. The date of installation of this tank is unknown. The tank and associated piping were excavated and removed from the ground in October 1990. No evidence of leakage from the tank or piping was observed during removal operations. No contaminants were detected in the excavation beneath the former tank or piping.

CFA-33, Fuel Tank at CFA-667 (South Side).

This is a former 4,000-gallon (15,140-liter) diesel fuel tank installed in 1951 and last used in 1986. The tank and associated piping were excavated and removed from the ground in October 1990. Soil contamination observed near the filling port of the tank was removed and treated. No evidence of leakage was observed from the tank or associated piping during removal operations. No contaminants were detected in the excavation beneath the tank above the 1 in 1,000,000 risk-based concentrations.

CFA-34, Diesel Tank at CFA-674 (South).

This is a former 260-gallon (984-liter) diesel fuel tank installed in the early 1950s and last used in 1976. The tank and associated piping were excavated and removed from the ground in October 1990. The tank contained several holes and leaked some of its contents into the surrounding soil. Soil contamination observed in the excavation was removed and treated. No contaminants were detected in the excavation beneath the tank above the 1 in 1,000,000 risk-based concentrations.

CFA-35, Sulfuric Acid Tank at CFA-674 (West Side).

This is a former 1,000-gallon (3,785-liter) sulfuric acid storage tank installed in 1953 and last used in 1965. The tank and associated piping were excavated and removed from the ground in June and July 1989. No evidence of leakage was observed from the tank or associated piping during removal operations. No contaminants were detected in the excavation beneath the tank above the 1 in 1,000,000 risk-based concentrations.

CFA-36, Gasoline Tank at building CFA-680.

This is a former 55-gallon (208-liter) gasoline tank installed in 1951 and last used in 1983. The tank and associated piping were excavated and removed from the ground in October 1990. No evidence of leakage was observed from the tank or associated piping during removal operations. No contaminants were detected in the excavation beneath the tank above the 1 in 1,000,000 risk-based concentrations.

CFA-37, Fuel Oil Tank at CFA-681 (South Side).

This is a former 500-gallon (1,892-liter) fuel oil tank installed in 1949 and last used in 1978. The tank and associated piping were excavated and removed from the ground in October 1990. Small holes and rust were observed in the tank during removal operations. Contaminated soil was removed from the excavation and treated. No contaminants were detected in the excavation beneath the tank above the 1 in 1,000,000 risk-based concentrations.

CFA-38, Fuel Oil Tank at CFA-633.

This is a former 500-gallon (1,893-liter) fuel oil tank installed in 1949 or 1950 and last used in 1980. The tank and associated piping were excavated and removed from the ground in May 1992. No evidence of leakage was observed from the tank or associated piping during removal operations. No contaminants were detected in the excavation beneath the tank above the 1 in 1,000,000 risk-based concentrations.

Public Involvement Activities

As soon as you receive and review this plan, you are encouraged to call any of the phone numbers listed in this plan to contact representatives of the DOE, INEL Community Relations Plan office, state of Idaho, or Region 10 of the EPA. You may wish to ask questions, request a briefing, or seek additional background information related to this proposed plan.

Public Involvement Activities

Public meetings will be held at the following locations. Representatives from the agencies will be available to discuss concerns and issues related to this proposed plan from 6:30 to 7 p.m. at each location. At 7 p.m., there will be a presentation by the agencies, followed by a question and answer session, and an opportunity to make written and/or verbal public comments. **A court reporter will prepare a transcript of the public meetings and will record public comments received.**

Idaho Falls	**Boise**	**Moscow**
Tuesday, May 16	Wednesday, May 17	Thursday, May 18
Engineering Research Office Building Room 159 (off the main lobby) 2525 N. Fremont	Earl Chandler Building (Division of Environmental Quality) Conference Rooms A and B 1410 N. Hilton	Palouse Empire Mall 1850 Pullman Road

(Comments continued, attach additional pages if necessary)

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Central Facilities Area Landfills I, II, and III

This postage-paid comment form is provided for your convenience in submitting written comments to DOE concerning the Central Facilities Area Landfills I, II, and III. If you would like to receive a copy of the Record of Decision and Responsiveness Summary, which addresses public comments received on this project, please make sure the information on the mailing label below is correct.

Comments: _____

(continued on reverse)

Idaho National Engineering Laboratory

INEL Environmental Restoration Program
P.O. Box 2047
Idaho Falls, ID 83403-2047

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